

Frequently Asked Questions About COVID-19

What does a positive COVID-19 serology result mean?

A positive serology result means you have either recovered from COVID-19, have received a COVID-19 vaccine, or both. No information regarding immunity can be inferred from a positive COVID-19 antibody, as there are no known antibody correlates of immunity to SARS-CoV-2.

Does a positive serology mean I am immune to COVID-19 infection?

No, positive serology does NOT mean you are immune to COVID-19 (i.e. cannot get infected again). Only a subset of antibodies can protect a person from infection, these are called neutralizing antibodies. More work needs to be done to better understand neutralizing antibodies. The serology assay performed by APL is not specific for neutralizing antibodies. This assay only tells you if someone has been infected with COVID-19 in the past or received vaccine.

What is the sensitivity of COVID-19 serology?

In our evaluation, the serology assay offered sensitivity was $\geq 90\%$ sensitive at ≥ 21 days post-symptom onset. The use of serology prior to 21 days of symptom onset is not recommended.

Does COVID-19 serology cross-react with other respiratory viruses?

In our evaluation, the serology assay offered had very low cross-reactivity with other respiratory viruses. There was one case of cross-reactivity with parainfluenza virus. We evaluated sera from individuals recently infected with influenza A and B, Respiratory Syncytial Virus A and B, enterovirus/rhinovirus, human metapneumovirus, parainfluenza viruses, and the four other human endemic coronaviruses (229E, HKU1, NL63, and OC43).

Can I order serology to diagnose acute COVID-19 infection?

No, serology should not be used for diagnosis of acute COVID-19 infection. Diagnostic testing for acute COVID-19 continues to be with polymerase chain reaction (PCR) of throat or nasopharyngeal specimens.

My patient had a negative COVID-19 PCR test, but still has symptoms. Can I use serology to diagnose infection?

If the clinician is still suspicious of COVID-19, and the patient is still symptomatic, a repeat PCR from a well-collected nasopharyngeal swab or lower respiratory tract specimen is preferred. Serology testing should not be used to diagnose acute infection.

My patient was positive for COVID-19 PCR. Can I use serology to track their infection?

A COVID-19 serology test will not change patient management, and is not advised. Positive COVID-19 serology is NOT yet known to be associated with immunity to infection. A positive result would not obviate the need for public health measures including self-isolating, frequent hand-washing and physical distancing while ill.

My patient was negative for COVID-19 PCR, or was not tested, and is no longer symptomatic. Can I use serology as a retrospective diagnosis?

A COVID-19 serology test will not change patient management, and is not advised. It is uncertain whether a positive COVID-19 serology can be used to determine immunity to infection. A positive result would not obviate the need for public health measures including self-isolating, frequent hand-washing and physical distancing while ill, and cannot act as a substitute for vaccination.

Can I have serology done to find out if I can visit my elderly family member?

No, serology has no utility in helping to answer this question. Based on what we know to date, if you were in the early stages of infection, you could be shedding virus and pass it to your family member despite antibody positivity. Follow local public health and health care facility guidance on visitation.

Can I have serology done to find out if I can work on a COVID-19 ward?

No, even if you were COVID-19 IgG positive, it is uncertain at present whether you would be protected from infection. A healthcare worker must still use appropriate PPE regardless of their COVID-19 serology result.

Can I have serology done to find out if I can travel?

Until there are recommendations from WHO, CDC, or PHAC with regards to allowing travel with a COVID-19 serology result, this is not an indication for COVID serology testing.

Can I have serology done to find out if I can return to my workplace?

Serology has no utility in helping to answer this question. Even if you were COVID-19 IgG positive, it is uncertain at present whether you would be protected from infection. Return to workplace decisions for those with COVID-19 are guided by Public Health recommendations and your workplace.

It seems like there are very few reasons to check serology. Are there any clinical indications for which COVID-19 serology may be helpful?

There are very few situations in which COVID-19 serology may help with patient diagnosis or management. These may include:

- Multisystem inflammatory syndrome (for further information, click [here](#))
- Pernio-like acral lesions or Chilblains (COVID-toes)
- Vasculitis in young children
- Unusual neurologic or thromboembolic events
- Evaluate eligibility for casirivimab/imdevimab for treatment of acute COVID-19

I want to learn more about COVID-19 serology. Is there a good reference that I can use?

Yes, there are several high quality resources, which are listed:

- COVID-19 National Immunity Task Force has up-to-date information on COVID-19 serology ([link](#))
- COVID-19 serology guidance from the Canadian Society of Clinical Chemists (CSCC) ([link](#))
- COVID-19 serology guidance published in the *Canadian Medical Association Journal (CMAJ)* ([link](#))
- COVID-19 serology information from the Centers for Disease Control (USA) ([link](#))

Last updated: October 28, 2021.